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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/889,263	10/16/2001	Takemi Aonuma	HIRA1180	1422
7590 11/04/2003			EXAMINER	
Gray Cary Ware Freidenrich Suite 1600 4365 Executive Drive San Diego, CA 92121-2189			MARX, IRENE	
			ART UNIT	PAPER NUMBER
			1651	

DATE MAILED: 11/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/889,263	AONUMA, TAKEMI	
	Examiner	Art Unit	
	Irene Marx	1651	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) 2-10, 13-15, 17 and 18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 12 and 16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

Applicant's election with traverse filed 9/10/03 is acknowledged. Claims 1, 12 and 16 are being considered on the merits. Claim 1 is being examined to the extent that is part of the food composition of claims 12 and 16.

The traversal is on the ground(s) that because there is an alleged lack of serious burden on the Examiner since the microorganism of claim 1 is common throughout the claims, the restriction is improper.

However, the present application was filed under 35 U.S.C § 371. Applicants failed to address the evidence presented regarding the lack of a common inventive concept between the groups presented, regarding, for example, WO 09/54022, page 16 col. 2, which demonstrates that at least *Bacillus subtilis* reduces nitrate. That this strain of *Bacillus subtilis* contains chitosan in its cell wall is adequately demonstrated by the statements in U.S. Patent No. 4,278,696 at col. 1, lines 36-44.

The claims as written are drawn to several inventions which are not linked by a special technical feature to form a single general inventive concept as is required for unity of invention.

Burden of examination is not an issue in requirements due to lack of unity of invention. Clearly different searches and issues are involved with each group.

For these reasons, the restriction requirement is deemed proper and is adhered to. The restriction requirement is hereby made FINAL.

Claims 2-11, 13-15 and 17-18 are withdrawn from consideration as directed to a non-elected invention.

The information disclosure statements filed 7/13/01 and 5/19/02 could not be considered. The documents cited therein have not been matched with the application and have not been scanned into the file under examination. Please resubmit the documents cited in these information disclosure statements.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Art Unit: 1651

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 12 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Heins *et al.* in light of Magnolato.

The claims are drawn to a feed or food composition comprising any *Bacillus* which is capable of reducing nitrates and contains chitin and/or chitosan in its cells walls. The cited reference discloses a food composition comprising a *Bacillus* strain which appears to be identical to the presently claimed strain. See, e.g., page 16 col. 2, which demonstrates that at least *Bacillus subtilis* reduces nitrate. That this strain contains chitosan in its cell wall is adequately demonstrated by the statements in Magnolato at col. 1, lines 36-44. The food or feed composition is disclosed as the whole broth culture of Table 2, for example, which contains cells of *Bacillus* having the required properties. Even though this composition inhibits the growth of some of the animals tested, it properly constitutes a food or feed composition. Moreover, it is well established in the biotechnological arts that *Bacillus* are a suitable source of single cell protein.

Thus, the claims are anticipated by the reference.

Claims directed to a feed composition comprising *Bacillus subtilis takemi* (FERM BP-6589) may allowable provided that all deposit issues are met, including an averment that all restrictions on the availability to the public of the material so deposited will be irrevocably removed upon the granting of a patent. MPEP 2403. Additionally, the deposit must be referred to in the body of the specification and be identified by deposit (accession) number, date of deposit, name and address of the depository and the complete taxonomic description.

No claim is allowed.

Art Unit: 1651

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Irene Marx whose telephone number is 703-308-2922. The examiner can normally be reached on M-F (6:30-3:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Wityshyn can be reached on 703-308-4743. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0926.

A handwritten signature in cursive script that reads "Irene Marx".

Irene Marx
Primary Examiner
Art Unit 1651